

LISTING OF THE CLAIMS

1-21. (Cancelled).

22. (Currently amended) An isolated nucleic acid having at least 80% nucleic acid sequence identity to:

(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45);~~

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ wherein the extracellular domain is amino acids 77-310;

~~(d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

~~(e)~~ the nucleic acid sequence ~~shown in Figure 19 (of SEQ ID NO:44);~~

~~(f)~~(e) the full length coding sequence of the nucleic acid sequence ~~shown in Figure 19 (of SEQ ID NO:44);~~ or

~~(g)~~(f) the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

23. (Currently amended) The isolated nucleic acid of Claim 22 having at least 85% nucleic acid sequence identity to:

(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45);~~

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ wherein the extracellular domain is amino acids 77-310;

~~(d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

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~~(e)~~—the nucleic acid sequence ~~shown in Figure 19 (of SEQ ID NO:44);~~

~~(f)(e)~~ the full length coding sequence of the nucleic acid sequence ~~shown in Figure 19 (of SEQ ID NO:44);~~ or

~~(g)(f)~~ the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

24. (Currently amended) The isolated nucleic acid of Claim 22 having at least 90% nucleic acid sequence identity to:

(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45);~~

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ wherein the extracellular domain is amino acids 77-310;

~~(d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

~~(e)~~—the nucleic acid sequence shown in Figure 19 (SEQ ID NO:44);

~~(f)(e)~~ the full length coding sequence of the nucleic acid sequence ~~shown in Figure 19 (of SEQ ID NO:44);~~ or

~~(g)(f)~~ the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

25. (Currently amended) The isolated nucleic acid of Claim 22 having at least 95% nucleic acid sequence identity to:

(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45);~~

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45),~~ lacking its associated signal peptide;

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(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45)~~, wherein the extracellular domain is amino acids 77-310;

~~(d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

~~(e) the nucleic acid sequence shown in Figure 19 (of SEQ ID NO:44);~~

~~(f)(e)~~ the full length coding sequence of the nucleic acid sequence shown in Figure 19 (SEQ ID NO:44); or

~~(g)(f)~~ the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

26. (Currently amended) The isolated nucleic acid of Claim 22 having at least 99% nucleic acid sequence identity to:

(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45);~~

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45), lacking its associated signal peptide;~~

(c) a nucleic acid sequence encoding the extracellular domain of the polypeptide ~~shown in Figure 20 (of SEQ ID NO:45)~~, wherein the extracellular domain is amino acids 77-310;

~~(d) a nucleic acid sequence encoding the extracellular domain of the polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

~~(e) the nucleic acid sequence shown in Figure 19 (SEQ ID NO:44);~~

~~(f)(e)~~ the full length coding sequence of the nucleic acid sequence ~~shown in Figure 19 (of SEQ ID NO:44);~~ or

~~(g)~~ the full-length coding sequence of the cDNA deposited under ATCC accession number 203966; and

wherein said isolated nucleic acid encodes a polypeptide that has the ability to induce chondrocyte redifferentiation.

27. (Currently amended) An isolated nucleic acid comprising:

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(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of~~
SEQ ID NO:45);

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of~~
SEQ ID NO:45), lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the
polypeptide ~~shown in Figure 20 (of~~ SEQ ID NO:45), wherein the extracellular domain is
amino acids 77-310;

~~(d) a nucleic acid sequence encoding the extracellular domain of the~~
~~polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

~~(e) the nucleic acid sequence shown in Figure 19 (of~~ SEQ ID NO:44);

~~(f)~~(e) the full length coding sequence of the nucleic acid sequence shown in
Figure 19 (SEQ ID NO:44); or

~~(g)~~(f) the full-length coding sequence of the cDNA deposited under ATCC
accession number 203966.

28. (Currently amended) The isolated nucleic acid of Claim 27 comprising a nucleic
acid sequence encoding the polypeptide ~~shown in Figure 20 (of~~ SEQ ID NO:45).

29. (Currently amended) The isolated nucleic acid of Claim 27 comprising a nucleic
acid sequence encoding the polypeptide ~~shown in Figure 20 (of~~ SEQ ID NO:45), lacking its
associated signal peptide.

30. (Currently amended) The isolated nucleic acid of Claim 27 comprising a nucleic
acid sequence encoding the extracellular domain of the polypeptide ~~shown in Figure 20 (of~~ SEQ
ID NO:45), wherein the extracellular domain is amino acids 77-310.

31. (Cancelled)

32. (Currently amended) The isolated nucleic acid of Claim 27 comprising the
nucleic acid sequence ~~shown in Figure 19 (of~~ SEQ ID NO:44).

33. (Currently amended) The isolated nucleic acid of Claim 27 comprising the full-
length coding sequence of the nucleic acid sequence ~~shown in Figure 19 (of~~ SEQ ID NO:44).

34. (Currently amended) The isolated nucleic acid of Claim 27 comprising the full-
length coding sequence of the cDNA deposited under ATCC accession number 203966.

35. (Currently amended) An isolated nucleic acid that hybridizes to:

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(a) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of~~
SEQ ID NO:45);

(b) a nucleic acid sequence encoding the polypeptide ~~shown in Figure 20 (of~~
SEQ ID NO:45), lacking its associated signal peptide;

(c) a nucleic acid sequence encoding the extracellular domain of the
polypeptide ~~shown in Figure 20 (of~~ SEQ ID NO:45), wherein the extracellular domain is
amino acids 77-310;

(d) ~~a nucleic acid sequence encoding the extracellular domain of the~~
~~polypeptide shown in Figure 20 (SEQ ID NO:45), lacking its associated signal peptide;~~

(e) ~~the nucleic acid sequence shown in Figure 19 (SEQ ID NO:44);~~

~~(f)~~(e) the full length coding sequence of the nucleic acid sequence ~~shown in~~
~~Figure 19 (of~~ SEQ ID NO:44); or

(g) the full-length coding sequence of the cDNA deposited under ATCC
accession number 203966;

wherein said isolated nucleic acid encodes a polypeptide that has the ability to
induce chondrocyte redifferentiation; and

wherein said stringent conditions comprise 50% formamide, 5 x SSC (0.75 M
NaCl, 0.075 M sodium citrate), 50 mM sodium phosphate (pH 6.8), 0.1% sodium
pyrophosphate, 5 x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1%
SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2 x SSC (sodium
chloride/sodium citrate) and 50% formamide at 55°C, followed by a high-stringency wash
consisting of 0.1 x SSC containing EDTA at 55°C.

36-37 (Cancelled).

38. (Previously presented) A vector comprising the nucleic acid of Claim 22.

39. (Previously presented) The vector of Claim 38, wherein said nucleic acid is
operably linked to control sequences recognized by a host cell transformed with the vector.

40. (Currently amended) An isolated host cell comprising the vector of Claim 38.

41. (Currently amended) The isolated host cell of Claim 40, wherein said cell is a
CHO cell, an *E. coli* or a yeast cell.